

APPENDIX

FOMC NOTES - PRF
SEPTEMBER 24, 1996

Mr. Chairman:

I will be referring to the four pages of color charts distributed to the Committee this morning.

As you can see on the first page, U.S. short-term, forward interest rates rose steadily following your last meeting but then began to decline in early September, particularly following the releases of the August employment report, CPI and retail sales, before jumping up a bit last week.

German forward rates have declined slightly since the Bundesbank lowered its repo rate by 30 basis points to 3 percent on August 22nd. Japanese forward rates have also declined since your last meeting, moving sharply on the release of the Bank of Japan's Tankan survey which reported a surprising decline in the manufacturing index. Market participants now expect both the Bundesbank and the Bank of Japan to be very much on hold for the months ahead.

Turning to the second page, in light of these shifts in forward rates, it is not so surprising that Japanese and German bond markets outperformed our own over the period, although the U.S. bond market did have a bit of a rally in early September.

More intriguing is the consistency with which German and U.S. equity markets rallied together in early September, as the German economy came to be perceived as somewhat stronger than feared and the U.S. economy as somewhat less strong than feared.

Turning to the third page, in September the dollar has rallied back almost to the levels it had reached in early July. In looking at these recent movements, however, I feel the burden of too many, rather than too few, explanations. Thus, it's harder to find a convincing, small number of discrete events to plot on these charts.

Broadly speaking, heightened market expectations for a firming in rates by the Committee helped underpin the dollar, particularly against the yen -- as market participants unwound their expectations for the Bank of Japan to follow any increase in rates by the Committee. In last ten days of August, ten-year differentials widened further in the dollar's favor by over 20 basis points against Germany and over 50 basis points against Japan.

However, I think the proximate cause of the dollar's sharp move up, particularly against the mark, was caused by a rush to cover short dollar positions that had built up in anticipation that the mark would strengthen in mid-September on the release of a French budget that would fail plausibly to meet the Maastricht criteria. Indeed, both the Bundesbank and the Bank of France were quite concerned about this risk.

In the event, however, the French budget failed to generate any immediate political or market controversy and anxiety about the challenges of meeting the Maastricht criteria have receded quite quickly. Thus, market participants who had positioned themselves for an appreciation of the mark, instead saw rallies in the U.S. bond and equity markets and they moved quickly to cover their short dollar positions, jolting the dollar up through 1.50 against the mark and 110 against the yen.

While the larger-than-expected U.S. trade deficit last week caused only a brief sell-off in the dollar, market participants are now more skeptical that the trade story will remain supportive for the dollar going forward.

Despite the sharp movements in the dollar, volatility on currency options has remained at quite low levels.

Turning to the fourth page, market expectations for the outcome of this meeting have shifted back and forth sharply.

Following your last meeting, the October Fed Funds futures contract implied a 40 percent probability of a 25 basis point tightening at this meeting. Expressed in terms of such a quarter-point move, this shot up to a 90 percent probability following the publication of the September 3rd Wall Street Journal article, which suggested some prospect of a 50 basis point hike, then declined back to around a 45 percent probability after the release of the August employment, price and retail sales figures, before jumping back up to almost a 70 percent probability after the release of the Reuters "discount rate" story last week.

These movements have stimulated some volatility in the spread between the 2-year note and the Committee's Fed Funds target rate, although this has been roughly comparable to the movements which took place in July. Implied volatility on options on the 2-year and 30-year futures contracts have recently begun to creep up but, again, are still roughly within the ranges seen during July.

Turning to domestic operations, reserve shortages were accentuated by seasonal currency growth and the higher, targeted Treasury balance around the mid-September tax date. A few days are worthy of note.

On Tuesday, September 3rd, pressures in the funding market were the result of the combination of the settlement of the Treasury's 2- and 5-year notes, a \$30 billion cash management bill, a Social Security payment date and other heavy corporate payment flows. Although the Desk had put a considerable amount of reserves in the system, the funds rate traded as high as 10 percent and the effective rate on the day was 6 percent.

On Wednesday, September 4th, the funds rate briefly traded at 20 percent. This did not appear to be the result of a follow-through from the previous day but was the result of two banks unexpectedly finding themselves short at the very end of the day. Funds had been trading quite comfortably on the 4th and, even including the trades conducted by these two institutions, the daily effective rate was only 5.35 percent.

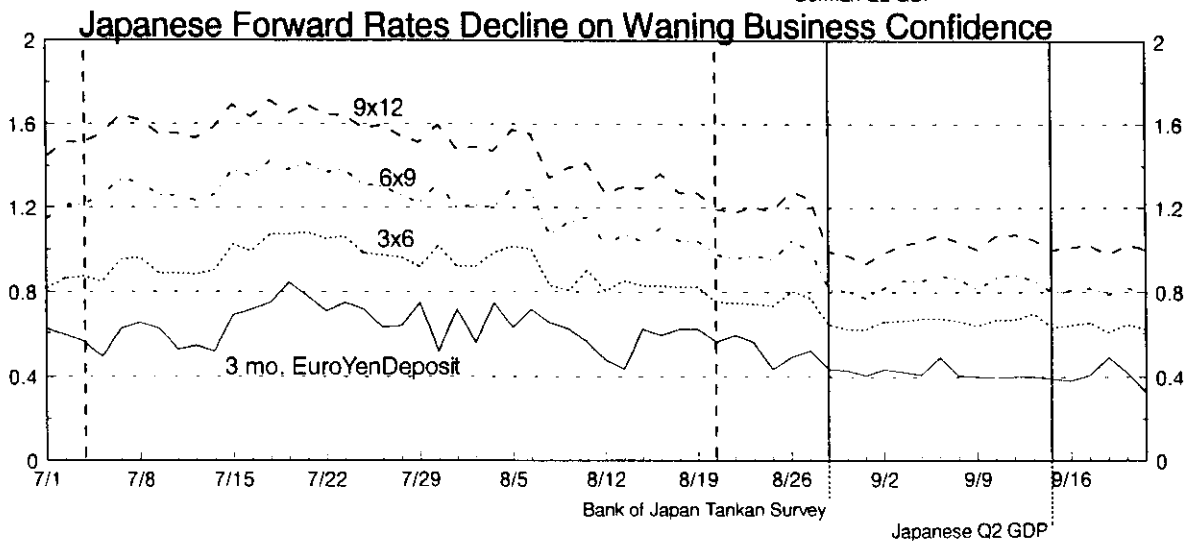
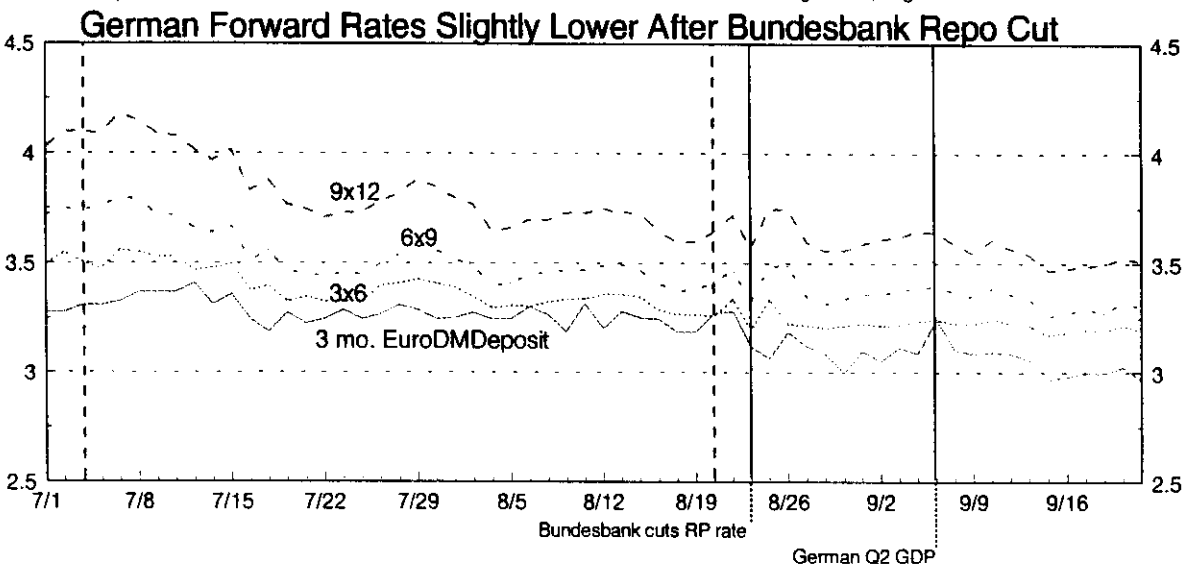
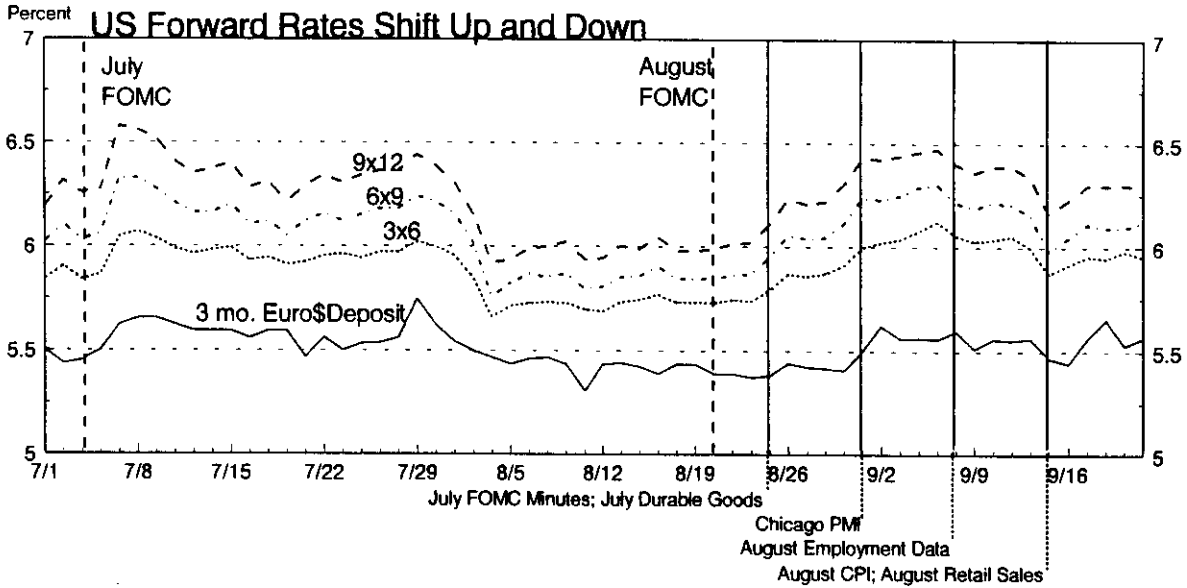
Last week we had a miss in our estimate of the Treasury balance, which left \$3 billion more reserves in the banking system than we intended which contributed to softness in the funds rate last week. Unfortunately, misses of this size are not uncommon around corporate tax payment dates.

Notwithstanding a few interesting days and some instances of elevated end-of-day rates, since your last meeting the effective Fed Funds rates has average 5.25 percent.

Mr. Chairman, we had no foreign exchange interventions during the period. I will need the Committee's ratification of the Desk's domestic operations which have been reported to you in greater detail in the Desk's Weekly and Pre-FOMC reports.

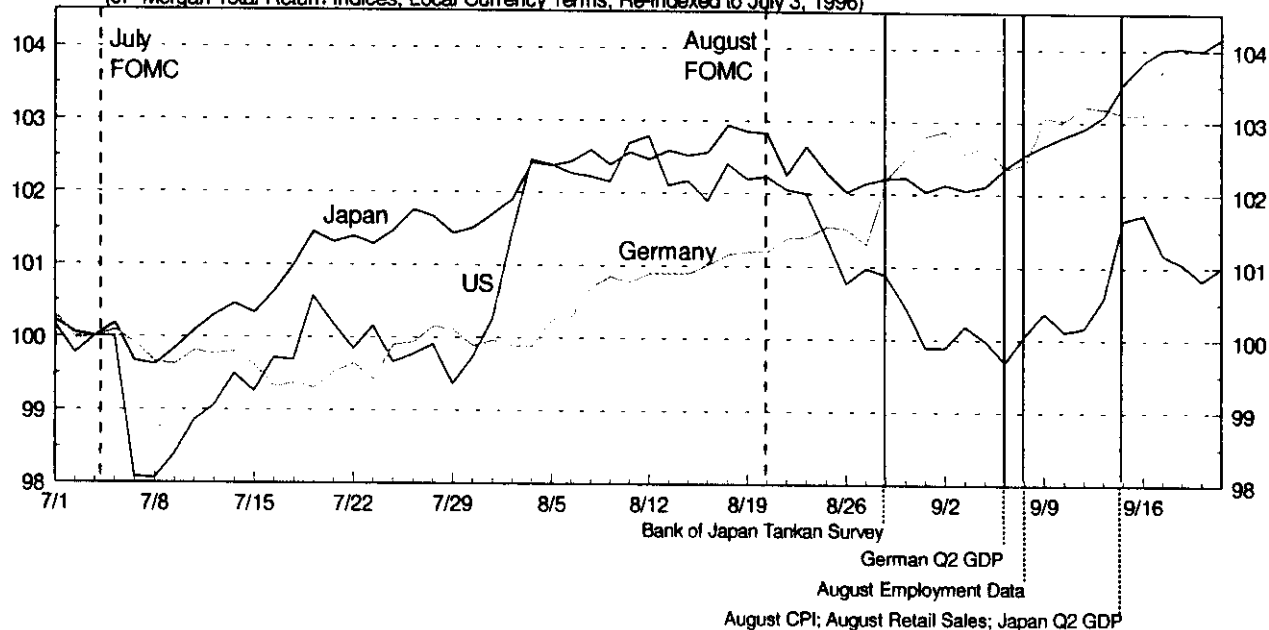
Forward Rate Agreements

Page 1



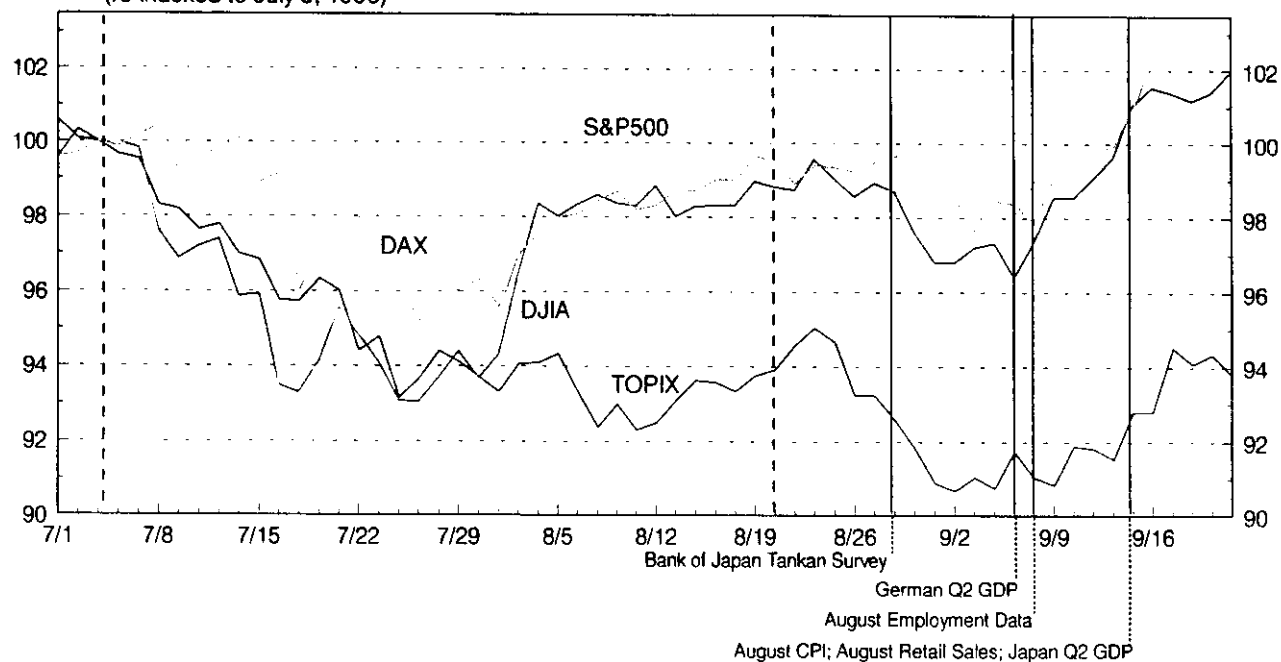
US Bonds Underperform Germany and Japan

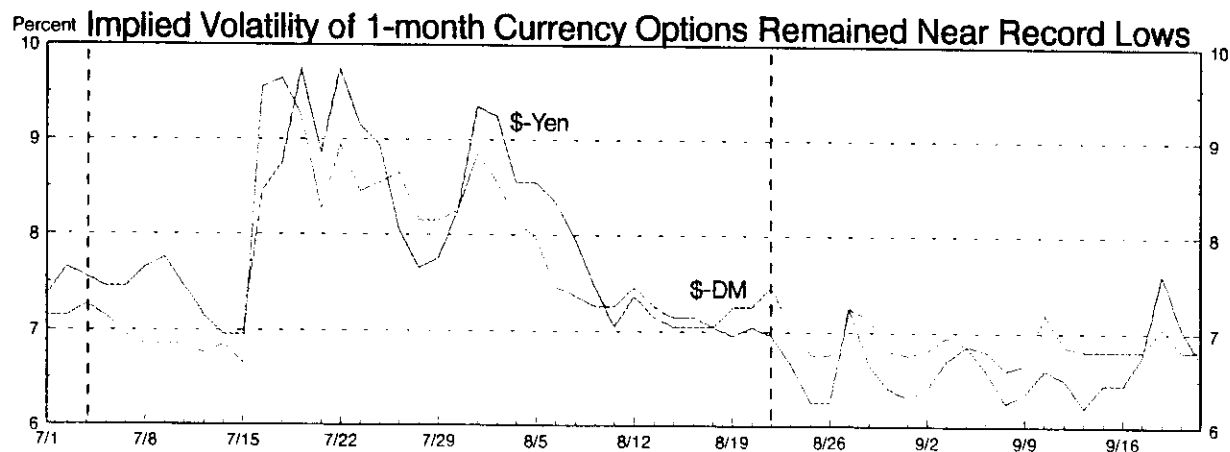
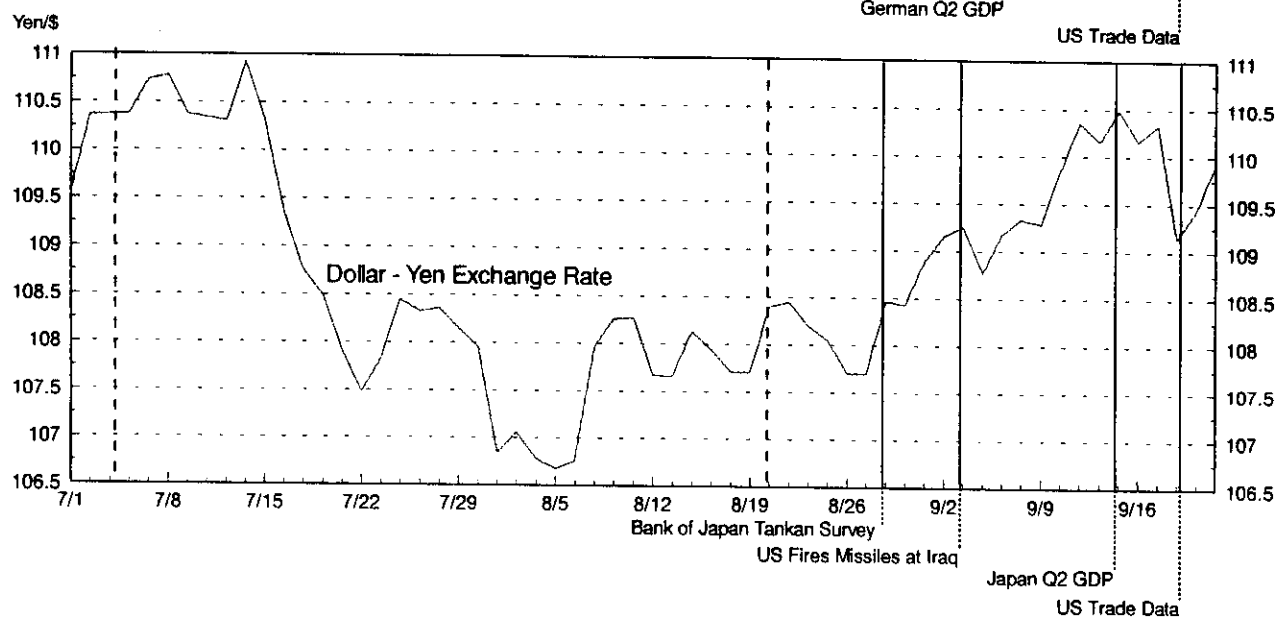
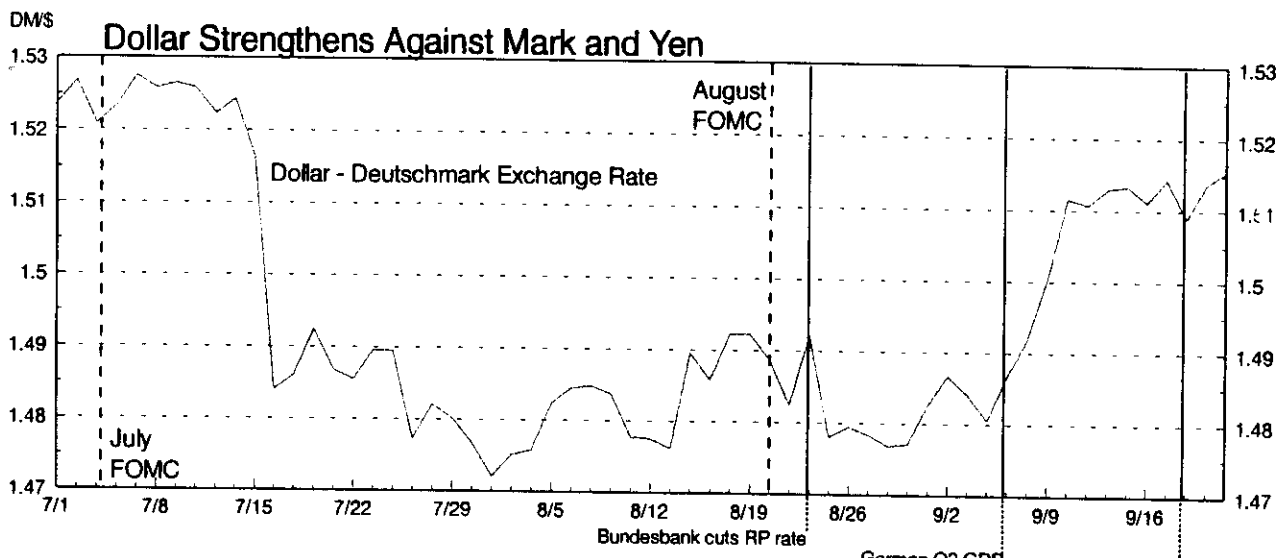
(JP Morgan Total Return Indices, Local Currency Terms, Re-indexed to July 3, 1996)



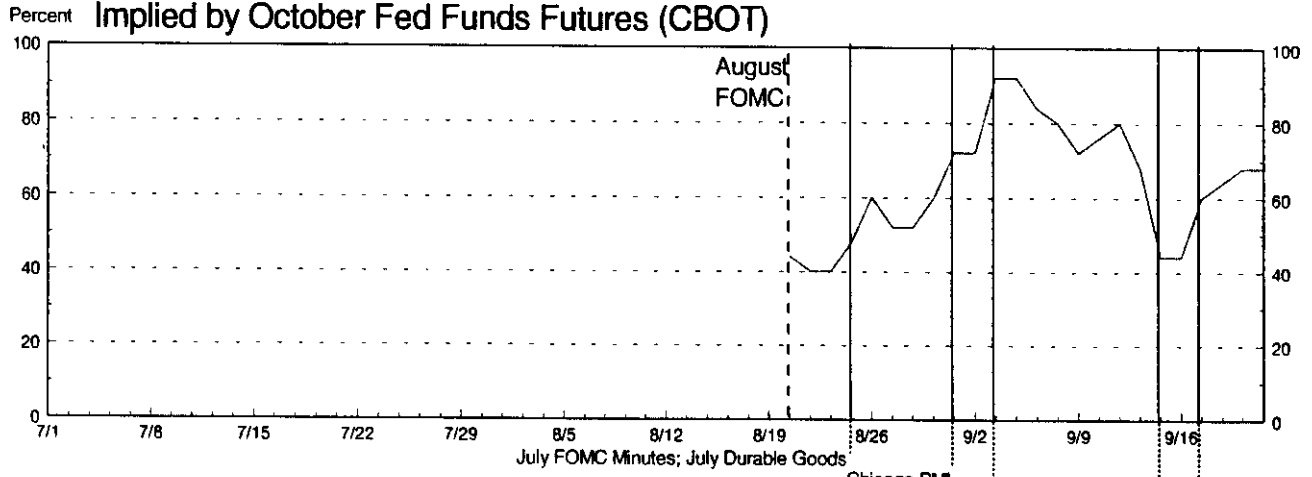
US and German Equities Continue Rally while Japanese Equities Lag

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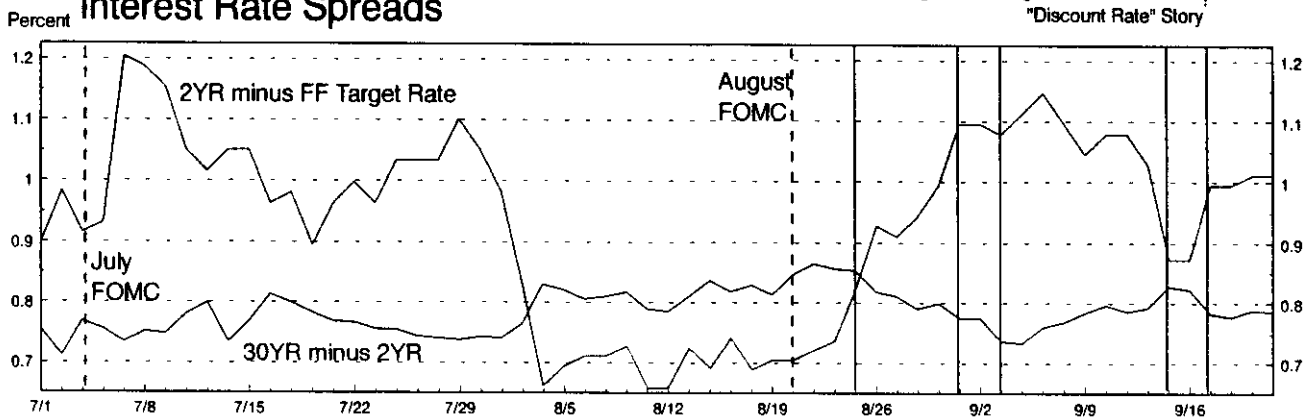




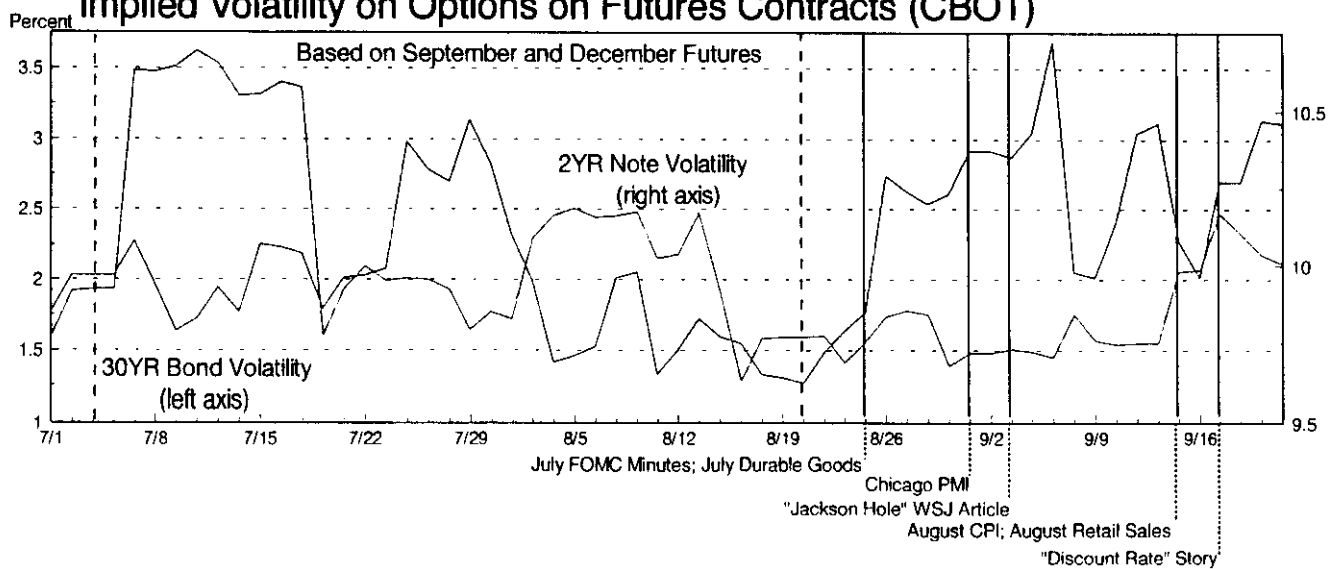
Probability of September 25 basis point rate hike Implied by October Fed Funds Futures (CBOT)



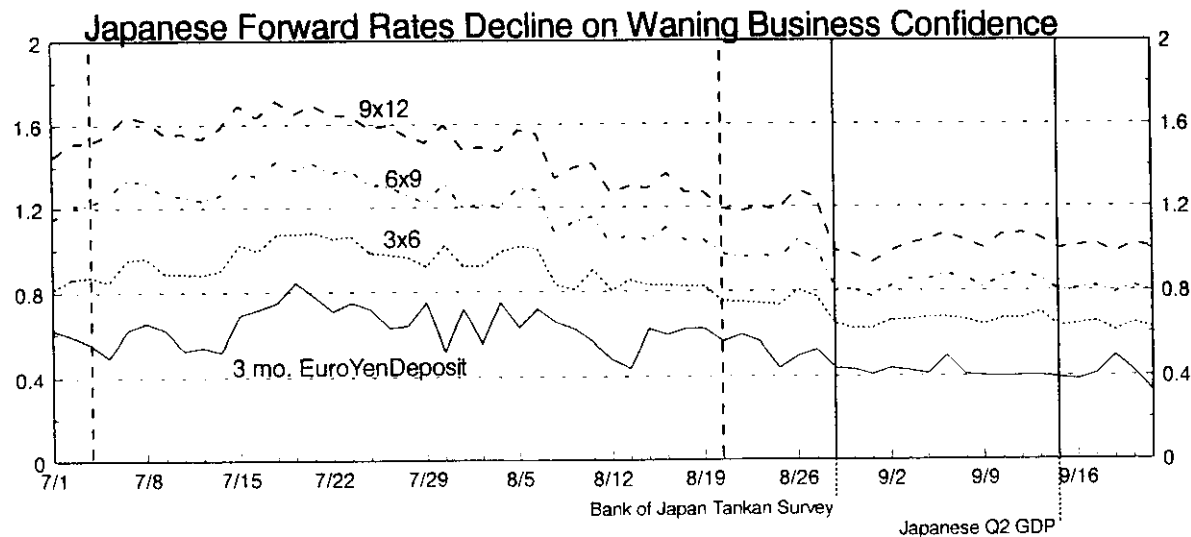
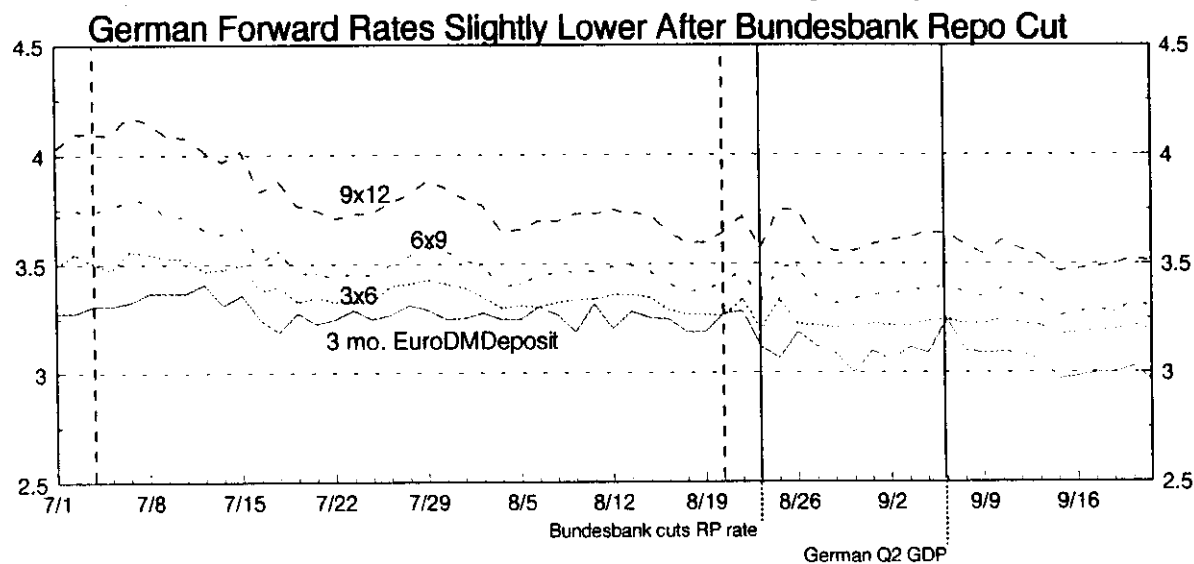
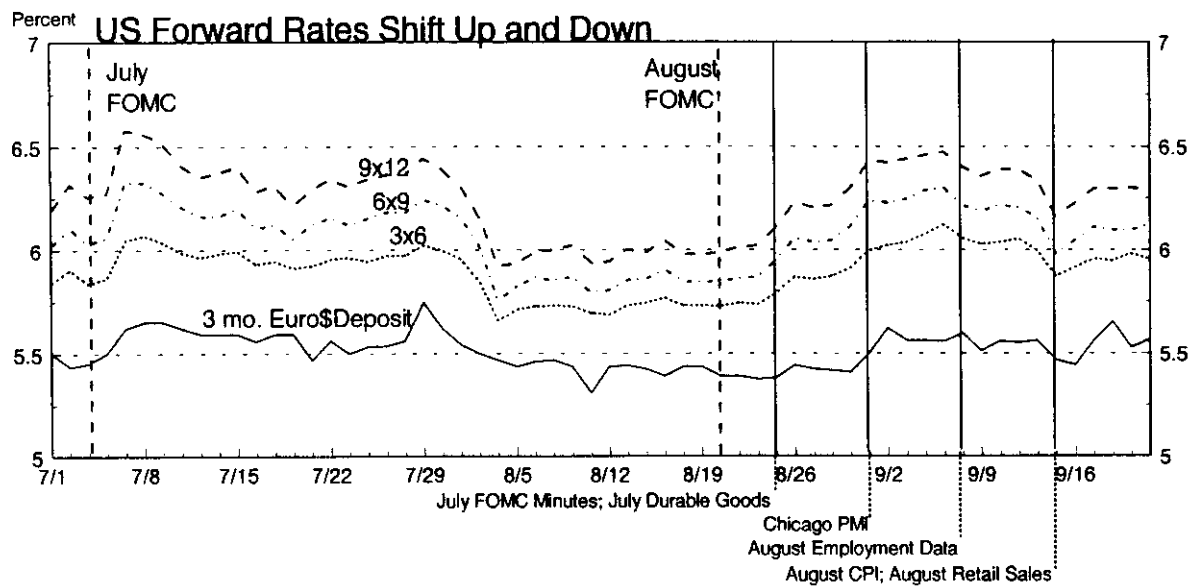
Interest Rate Spreads



Implied Volatility on Options on Futures Contracts (CBOT)

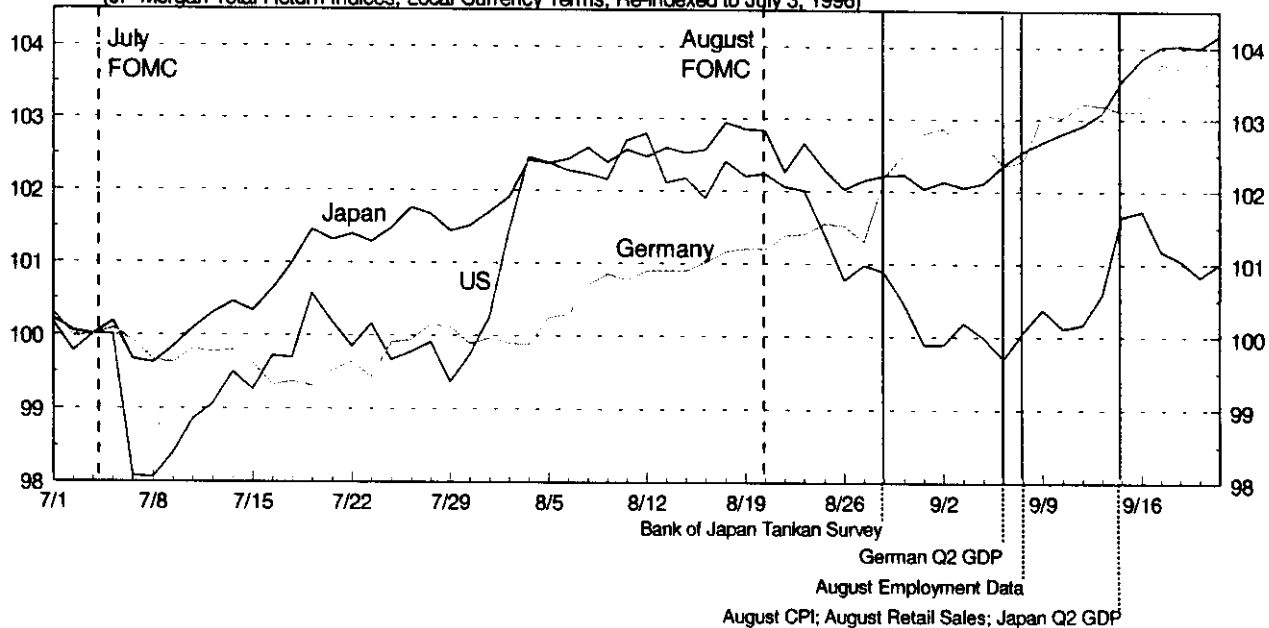


Forward Rate Agreements



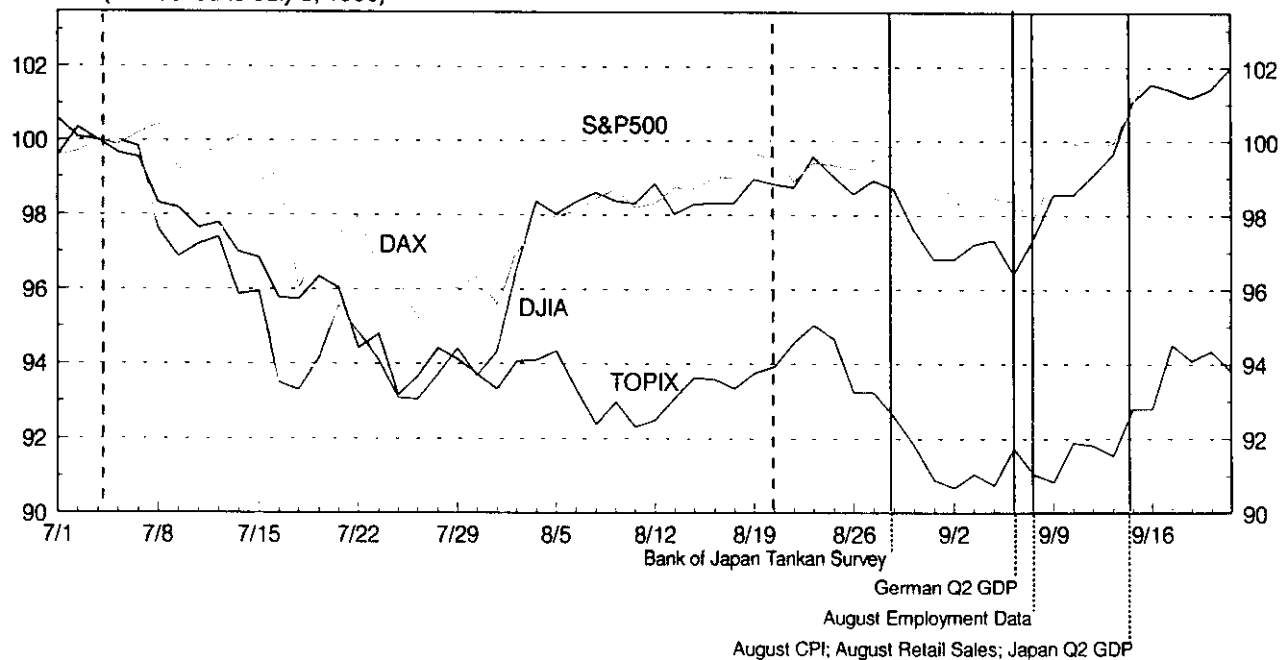
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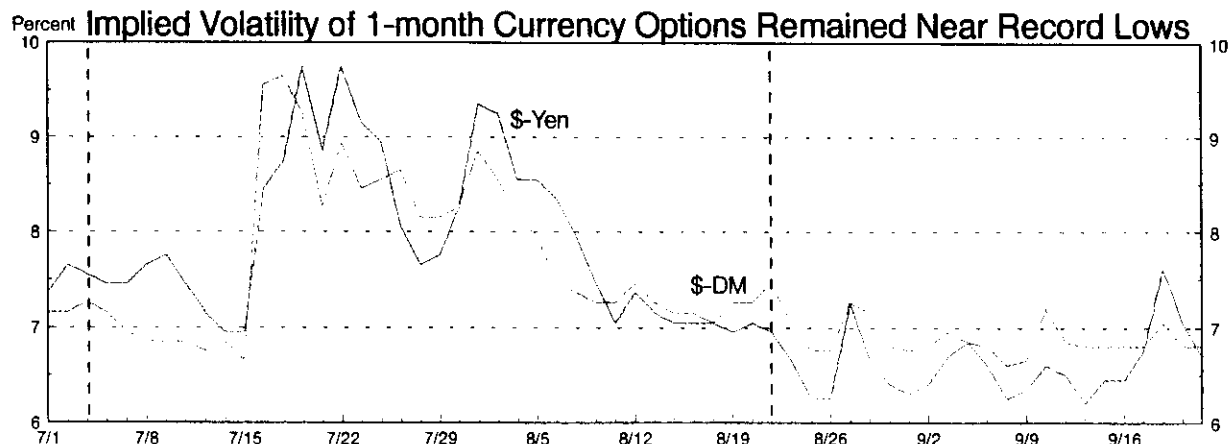
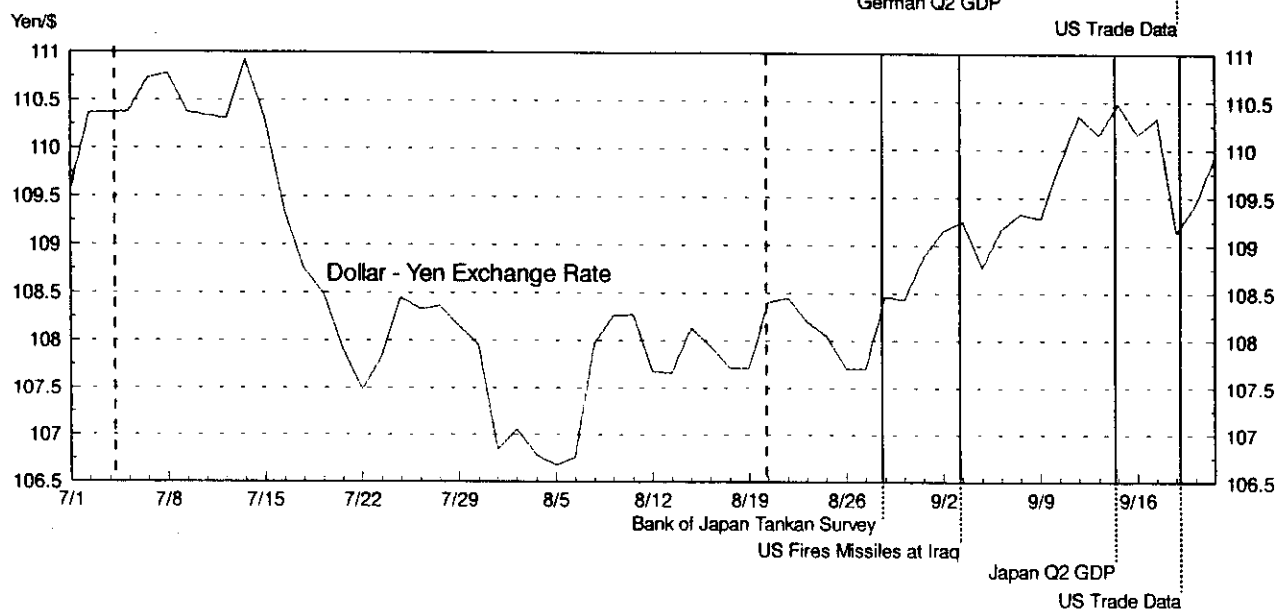
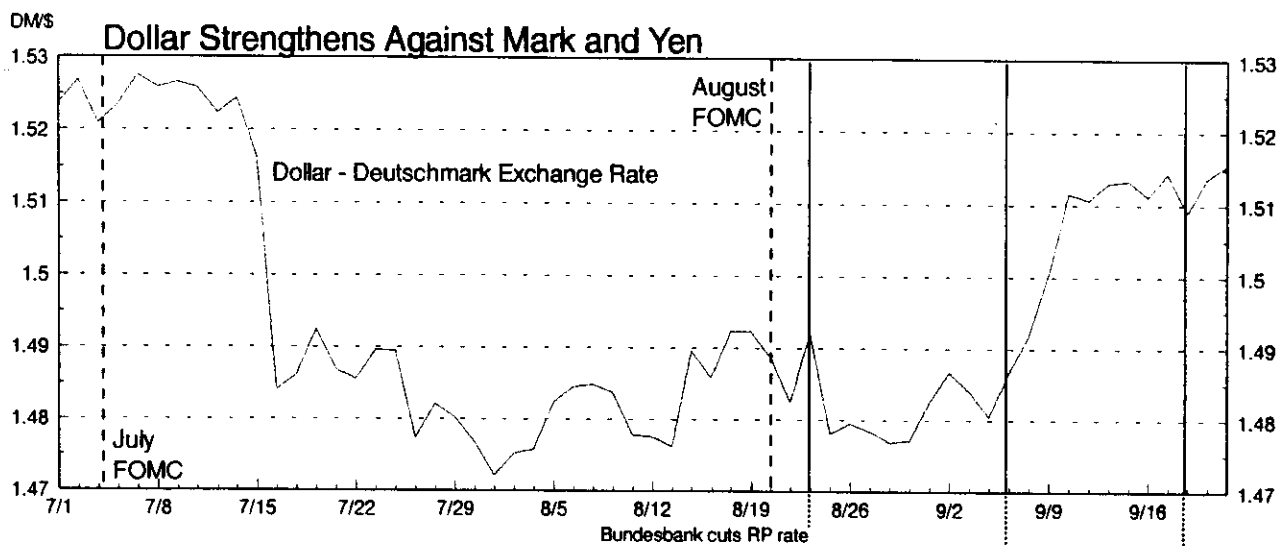
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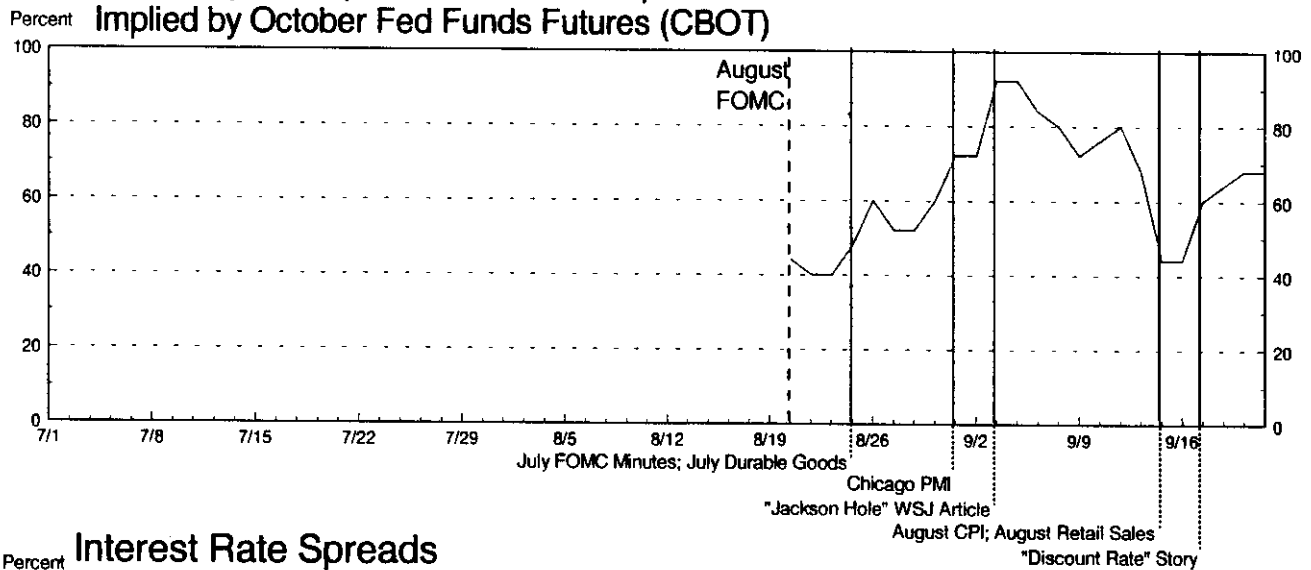
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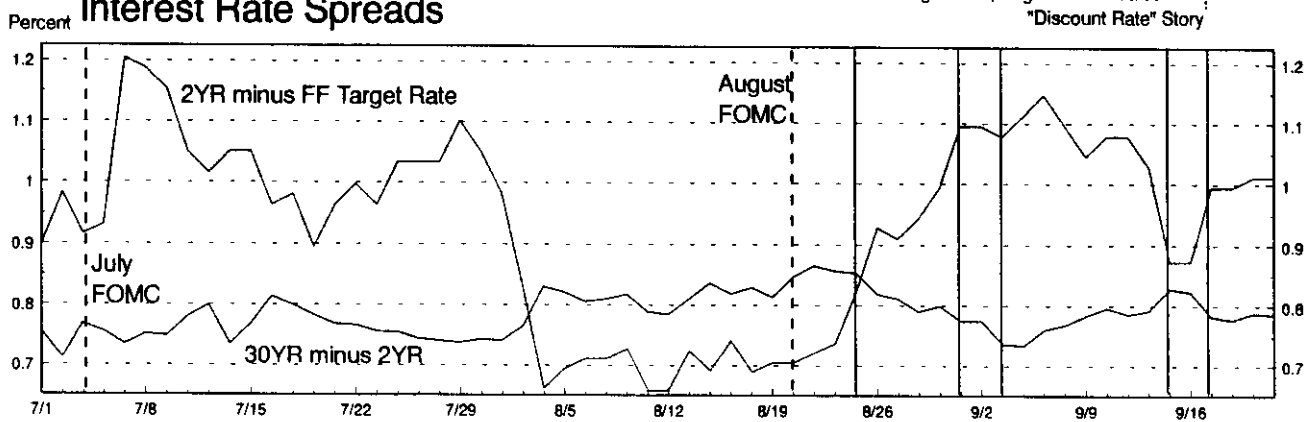




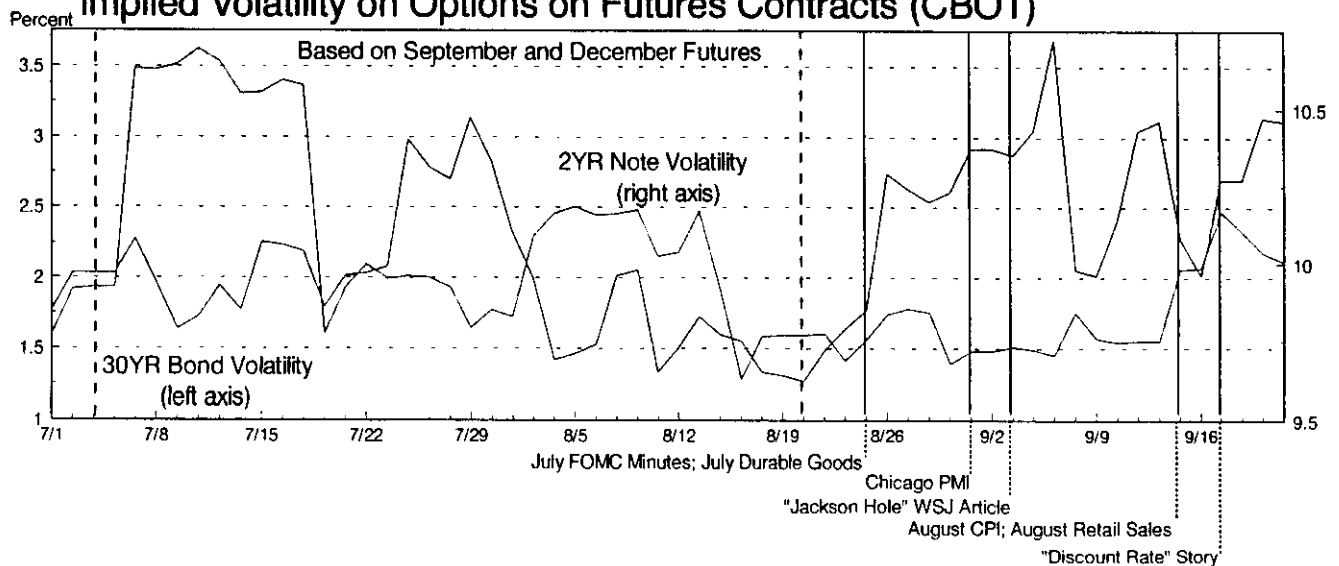
Probability of September 25 basis point rate hike Implied by October Fed Funds Futures (CBOT)



Interest Rate Spreads



Implied Volatility on Options on Futures Contracts (CBOT)



Michael J. Prell
September 24, 1996

FOMC BRIEFING

The data received in an interval between Committee meetings rarely, if ever, provide an entirely coherent and persuasive indication of where the economy is headed. That said, the recent period may still be remarkable for its statistical muddle. Indeed, the latest Greenbook may have seemed to you to be a story of why every other number released since the twentieth of August should not be believed.

I want to review just briefly a few of the anomalies we've identified. First, on the labor front, the plunge of the unemployment rate in August to 5.1 percent seems questionable, and probably reflects in part seasonal adjustment problems. We're anticipating that there will be at least some retracement in September, involving another bounce back up in the participation rate. Labor demand clearly has been strong, as indicated by the employment and initial claims figures, but not so robust as to be able to chop three-tenths off the jobless rate this summer.

On the spending side, we're cautioning against reading too much into the reported net decline in retail sales from May to August. We're predicting that there will be some upward revision or a near-term resurgence in sales, given our assessment of the demand trends that should be associated with the strong income and wealth and buoyant sentiment we've seen lately.

We also told you in the Greenbook that the recent data on nonresidential construction contracts seemed oddly weak, against the backdrop of a reported firming of the commercial real estate market; we therefore predicted that actual building activity would hold up

better than the trend in contracts suggested. Since the Greenbook, we've received a report on contracts showing upward revisions to earlier months and a big jump in August, so we feel our forecast is on firmer ground now.

On the other hand, we told you that you shouldn't believe that sales of new homes soared in July, as initially reported, and that housing demand actually has been tapering gradually since the spring. Now, I also have to tell you to discount heavily the August figures on housing starts, which came out last Thursday and showed a spurt in single-family units. It looks to us like the high starts figure last month reflected a combination of statistical noise and perhaps an unusually quick drawdown of permits. But, that said, it may well be that homebuilding has held up better than we judged.

We told you that the BEA's figures on federal purchases seem to be fouled up, but that it doesn't matter for the near-term projection because they will come up with sensible "best-change" estimates even if the levels are wrong. Admittedly, not a very satisfying story, but potentially an important one--as demonstrated by the surprises in recent GDP numbers.

We told you that the July figures on international trade were misleading, because of seasonal adjustment problems, one-time payments related to the Olympics, and the usual noise in the monthly data. Net exports really aren't weakening that much.

And, finally, we indicated that you should believe that wage inflation is on the upswing, as underscored by the August report on average hourly earnings; however, at the same time, we advised you to resist the temptation to extrapolate the good news on price trends in the subdued August PPI and CPI numbers.

So, where does this all leave us?

Well, first, we're pretty sure that the economy is on a solid growth path, with little risk of recession or even seriously subpar growth in the near term--at least absent some significant exogenous shock. The economy appears to be enjoying ample liquidity under the current monetary policy settings, and fiscal policy probably is exerting only a modest degree of restraint on demand. As I've suggested, there are enough positives in the consumer sector currently to counterbalance any concerns related to debt and delinquency problems. Manufacturers' order books indicate favorable prospects for capital goods production for at least a while. Although we still think that homebuilding is peaking, the latest data suggest the improbability of a marked weakening in the absence of an appreciable further rise in mortgage rates. And, though the July trade figures reinforce our sense that net exports are still on a downward path, this doesn't appear likely to be an overwhelming drag on activity.

All this leads us to the prediction that growth will be more moderate over coming quarters, but still sufficient to hold resource utilization in the recent high range. We are in the mainstream of forecasters in this regard: Our 2.1 percent 1997 GDP projection is just a tenth above the early September Blue Chip consensus. Looking at the two wings of the Blue Chip forecast distribution, I'd have to say that I'm somewhat more impressed by the arguments for greater growth than we've projected in the next few quarters. Perhaps this is just because we're coming off a strong period--which is a psychological trap one needs to avoid. But, I do worry, for example, that housing starts and the stock market are telling us that higher bond yields are not biting into final demand even to the moderate degree we think, and that stronger sales could in turn prompt businesses to build inventories more aggressively.

In the end, I don't think the probability distribution around our growth forecast is severely skewed, but you'll undoubtedly want to assess that distribution in the context of the inflation implications of a deviation from the predicted track. We still hold with some conviction the view that the underlying trend of inflation will be deteriorating in the period ahead unless growth of aggregate demand slows enough to lessen significantly the pressures on resources--especially labor.

We find the evidence that wages are rising more rapidly quite persuasive. The evidence on total compensation is less persuasive statistically, but it is there. And, whatever the magnitude of the minimum wage effect, its sign is clearly positive in the short run.

The big question is whether the trend of prices must follow the projected acceleration of compensation. One might argue about the use of the word "must," but we believe that the answer is "yes, at least eventually." Granted that businesses are still talking about competition depriving them of pricing leverage, but--absent favorable supply shocks--it's not obvious what in the outlook for activity and capacity growth would lead one to think that price markups would be allowed to erode continuously. At some point, it seems more likely that a broadly experienced cost increase--like that for labor--would be associated with some rise in prices. Thus, despite the adjustments we've made in response to the recent good news on the core CPI, we remain comfortable with our forecast of an uptilt in the underlying trend of inflation. The only question is when and how much. We've taken our best shot on that score. Again, you'll have to make your own assessment of how to deal with the uncertainty surrounding our forecast in the context of your policy objectives.

September 24, 1996

FOMC Briefing
Donald L. Kohn

The Committee is facing today the same issue, with many of the same pros and cons, as it has faced for the last several meetings. As one market letter recently noted, the data released over the intermeeting period have bolstered the arguments both for standing pat and for tightening.

On the one hand, prices have remained surprisingly quiescent, and one key element of final demand--consumption spending--has softened appreciably. With no signs in product markets that pressures on resources are pervasive, and with demand slowing, there still is some chance that inflation may be contained without a policy adjustment. If so, standing pat will have allowed the economy to produce at a higher level than if the Committee had tightened. Moreover, even if inflation emerges, it should do so slowly and gradually from a base that is lower than had been expected by many, restraining the associated uptick in inflation expectations. The Committee may view these circumstances as reducing the potential risks and costs of waiting a while longer to assess the situation.

On the other hand, the revision to second-quarter GDP, the unemployment rate, and the behavior of wages all suggest that the economy more likely is producing beyond its potential. Moreover, housing starts and initial claims

raise questions about whether demand is slowing sufficiently to take the pressure off resources. This situation, which is reflected in the upward tilt to inflation in the Greenbook, makes it more likely that at some point you will have to tighten to hold inflation near its current rate. Markets themselves have built in a slight firming by early next year--though this may be colored as much by their reading about your intentions as by their judgment of what would be necessary to achieve your goal. They may also be building in your usual response to strong economic growth. Output has expanded faster than potential for two and perhaps three quarters, and faster than expected. It would be unusual--inconsistent, for example, with the Taylor rule--for the Committee not to tighten at some point in these circumstances, unless inflation were receding.

One question is what sort of indicators, in advance of actual inflation itself, might prompt a judgment--now or in the future--that tightening had become necessary. In the past couple of years we have learned--or relearned--that some of the more problematic indicators are those purporting to measure the degree of slack in the economy. One set of problems stems, of course, from the difficulty in estimating the level of sustainable output or the NAIRU. Moreover, the Federal Reserve has made a point of saying that it doesn't arbitrarily hold down growth or target a particular level of output or unemployment, but instead looks for signs of

emerging price pressures. While those signs are in short supply to date, output appreciably beyond estimated potential--however broad the range of uncertainty around that estimate--poses a significant risk of inflation later strengthening. Consequently, even without an overt acceleration in prices, if output continues to run well above estimated potential, and especially if resource utilization rises further, the Committee may need to consider whether it wants more assurance that policy is not promoting an eventual pickup in inflation.

Any such judgment can't be divorced from indicators of wage and price developments. But a number of aspects of the current situation makes interpreting these data complex as well. For one, while favorable supply developments--perhaps related to job insecurity or decelerating medical costs--are undoubtedly contributing to the surprisingly damped increases in compensation and prices, we should not dismiss the possibility that part of this good behavior is a reflection of the credibility of low inflation itself. That is, expectations that low inflation will continue--built on the experience of recent years and evident in survey results--may be providing considerable inertia to the inflation process. The risk is that policymakers mistakenly attribute the sluggish response of inflation to high output entirely to persisting favorable supply conditions. Attempts to stimulate aggregate demand to utilize the

seemingly more ample aggregate supply will be unsuccessful over time and only result in an eventual deterioration in inflation and inflation expectations.

A second complexity in interpreting wage and price indicators is the nature of the inflation problem that may be emerging. The circumstances facing the Committee in this expansion may be somewhat different than those in some previous inflation cycles. Pressures seem more evident in labor than product markets. In part because of the sizeable investment in capital equipment, capacity utilization has dropped from its recent peak, but the unemployment rate is at a new low for this cycle. Continuing slack in foreign industrial economies, damping inflation abroad and stimulating foreign competition with U.S. manufacturers, may also be alleviating pressures in product markets. In these circumstances, any pickup in inflation should be slow and perhaps delayed. Nonetheless, the Committee may not be able to take very much comfort from the absence of such traditional early indicators of price pressures as rising commodity and intermediate materials prices, or slower supplier deliveries. Instead, in the staff forecast, tightness in the labor market gradually puts pressures on costs, feeding through over time into rising rates of increase in prices.

I've already noted the key role of damped expectations holding down inflation. In that regard, the Committee may want to be alert to signs in financial and related

markets that those expectations are beginning to drift higher after a long period of stability. In the past, the Committee looked at movements in the dollar, long-term interest rates and commodity prices among other variables for clues in this regard. It is important to view these and other financial indicators in combination--especially how they react to incoming news on the economy or prices. A rise in long-term rates by itself may not indicate increasing inflation expectations, but rather a judgment that higher real rates over the next few years will be required to hold the economy close to potential. But a rise in rates associated with a steady or declining dollar, other things equal, for example, might be a warning that inflation expectations, not expected real rates, were being revised higher. So far this year, a dollar on the firm side has tended to confirm that the rise in long-term rates since January likely has been mainly real. To be sure, price or rate changes in financial markets may not be easily parsed into various types of expectations or readily explainable as an appropriate response to news. The amazing resilience of the stock market this year suggests a note of caution in expecting to extract rational views from the market. Moreover, financial market responses may not be mirrored in attitudes in labor and product markets. It seems unlikely that price and wage setters react as strongly or to the same types of information that affect financial markets. But

financial market reactions themselves can create difficulties for the Committee and at times they may foreshadow more far-reaching changes in attitudes.

For flows in financial markets, with levels of interest rates not expected to move much on balance, the staff sees growth of broad money and credit going forward about in line with the projected expansion of nominal spending. The linkage is far from tight, despite the better behavior of M2 demand of late. But since our projections embody a slight upward tilt to inflation, substantially more rapid money and credit growth on a persistent basis might be another warning sign of significant inflation pressures.

If, at this meeting or some time in the future, you do raise the funds rate, the odds are high that other interest rates will rise as well. How much is a more difficult call.

Some have argued in the past that a firm show of resolve by the Federal Reserve will damp inflation expectations enough to offset higher real rates and reduce long-term interest rates. We have had, unfortunately, over the intermeeting period a couple of experiments in which markets learned something about purported Federal Reserve intentions with respect to policy actions, divorced from news about the economy or prices. In these cases, information that the Federal Reserve might tighten caused interest rates across

the maturity spectrum to increase, shifting up forward rates far into the future.

In addition, over the last decade, long-term rates have in fact tended to move considerably more in response to policy actions that represented a change in direction than to those that kept rates going in the same direction--a tendency that has concerned some of you in the current situation.

Thus, markets--equally as well as debt--are likely to respond substantially to a tightening, even if such action is forecast by the majority of analysts and mostly priced into future rates. Such a reaction would reflect a response to news not only about the level of short-term rates, but also about your assessment of the economic risks. Nonetheless, as we noted in the bluebook, much market commentary does seem to have bought onto the idea that any change in policy direction need not be the start of a long string of actions in the same direction. In part, this reflects the effect of some of the incoming data, which have been read as indicating that inflation pressures will not be so intense as to require a major policy adjustment. In addition, the minutes of your meetings have noted that many Committee members share the view that policy is not so tilted to the accommodative side as to suggest the need for much adjustment. As a consequence, if the Committee were to tighten, market reaction is likely to be smaller than might

be inferred from previous changes in policy direction. The wording of the announcement could improve the chances that the market would see the tightening as limited in scope.